

MULTI-PANEL DEVICE WITH CONFIGURABLE INTERFACE

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present disclosure claims the benefit of Provisional Application No. 61/095,225, filed Sep. 8, 2008, which is incorporated by reference herein in its entirety and to which priority is claimed.

FIELD

[0002] The present disclosure is generally related to a multi-panel electronic device.

DESCRIPTION OF RELATED ART

[0003] Advances in technology have resulted in smaller and more powerful computing devices. For example, there currently exist a variety of portable personal computing devices, including wireless computing devices, such as portable wireless telephones, personal digital assistants (PDAs), and paging devices that are small, lightweight, and easily carried by users. More specifically, portable wireless telephones, such as cellular telephones and internet protocol (IP) telephones, can communicate voice and data packets over wireless networks. Further, many such portable wireless telephones include other types of devices that are incorporated therein. For example, a portable wireless telephone can also include a digital still camera, a digital video camera, a digital recorder, and an audio file player. Also, such wireless telephones can process executable instructions, including software applications, such as a web browser application, that can be used to access the Internet. As such, these portable wireless telephones can include significant computing capabilities.

[0004] Although such portable devices may support software applications, the usefulness of such portable devices is limited by a size of a display screen of the device. Generally, smaller display screens enable devices to have smaller form factors for easier portability and convenience. However, smaller display screens limit an amount of content that can be displayed to a user and may therefore reduce a richness of the user's interactions with the portable device.

SUMMARY

[0005] A multi-panel device with a configurable interface is disclosed. Each of the panels includes a display surface that displays a user interface. The panels are configured to rotate with respect to one another into various configurations. When fully extended, the device may provide a panorama view, similar to widescreen televisions. When fully folded, the device may provide a small form factor with an abbreviated view similar to cellular telephones. At least two panels of the device are coupled by a hinge having a sensor to detect the configuration of one of the panels relative to the other panel. The hinge may also include a number of detents to hold one panel in a stationary, predetermined configuration. Based on the detected configuration, the display may be modified accordingly.

[0006] In a particular embodiment, a device is disclosed. The device includes a first hinge coupled to a first panel and coupled to a second panel. The first panel includes a first display surface and the second panel includes a second display surface. The second hinge is coupled to the second panel and coupled to a third panel that includes a third display

surface. The device also includes a sensor coupled to the first hinge to detect a relative orientation of the first panel to the second panel. The device includes a processor responsive to the sensor to detect a device configuration. The processor is configured to adjust a user interface displayed at the first display surface, the second display surface, and the third display surface based on the detected device configuration. In a particular embodiment of the device, the first hinge is detented.

[0007] In another particular embodiment, a method is disclosed. The method includes detecting a device configuration responsive to a sensor of a device. The device includes a first hinge coupled to a first panel and coupled to a second panel, where the first panel includes a first display surface and the second panel includes a second display surface. The device also includes a second hinge coupled to the second panel and coupled to a third panel that includes a third display surface. The sensor is coupled to the first hinge to detect a relative orientation of the first panel to the second panel. The method also includes adjusting a user interface displayed at the first display surface, the second display surface, and the third display surface based on the detected device configuration.

[0008] One particular advantage provided by at least one of the disclosed embodiments is an intuitive operation of a multi-panel electronic device in which a user can change the electronic device's physical configuration based on the user's preference, and the electronic device automatically adjusts operation in response to detecting the change in physical configuration. Another particular advantage is that the device may be configured in predetermined stationary configurations via the detents which may be integrated into the hinges.

[0009] Other aspects, advantages, and features of the present disclosure will become apparent after review of the entire application, including the following sections: Brief Description of the Drawings, Detailed Description, and the Claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a diagram of a first illustrative embodiment of an electronic device;

[0011] FIG. 2 is a diagram of an illustrative embodiment of the electronic device of FIG. 1 in a fully folded configuration;

[0012] FIG. 3 is a diagram of an illustrative embodiment of the electronic device of FIG. 1 in a thumbing configuration;

[0013] FIG. 4 is a diagram of an illustrative embodiment of the electronic device of FIG. 1 in a travel clock configuration;

[0014] FIG. 5 is a diagram of a first illustrative embodiment of the electronic device of FIG. 1 in a fully extended configuration;

[0015] FIG. 6 is a diagram of a second illustrative embodiment of the electronic device of FIG. 1 in a fully extended configuration;

[0016] FIG. 7 is a diagram of an illustrative embodiment of the electronic device of FIG. 1 in a video conferencing configuration;

[0017] FIG. 8 is a block diagram of a second illustrative embodiment of an electronic device;

[0018] FIG. 9 is a diagram of a third illustrative embodiment of an electronic device;

[0019] FIG. 10 is a partial cross-sectional diagram of the electronic device of FIG. 9;

[0020] FIG. 11 is a diagram of an illustrative embodiment of the electronic device of FIG. 9 in an angled configuration;